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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,906	09/18/2003	G.R. Mohan Rao	17200-P043US	7033

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EXAMINER
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PORTKA, GARY J

ART UNIT	PAPER NUMBER
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2188

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/665,906	RAO, G.R. MOHAN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Gary J. Portka	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 29,31 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>various</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-28 and 30, drawn to a multiport switch having memory of a single column and predetermined word width, classified in class 370, subclass 412.
  - II. Claims 29 and 31-32, drawn to a switch/memory with multiple columns and programmable word width, classified in class 370, subclass 412.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination I has separate utility such as a switch using a memory with a single column and having a predetermined word width. See MPEP § 806.05(d).

3. Because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Applicant's representative office on March 7, 2006 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-28 and 30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 29 and 31-32 are withdrawn from further

consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Information Disclosure Statement***

5. In an attempt to fulfill Applicant's duty to disclose information which is material to patentability according to 37 CFR 1.56, Applicants have submitted a large number of documents for the Examiner to consider. However, it appears from a cursory review of the documents that the vast majority of them are not material to patentability and should not have been submitted. In fact, the sheer number of documents creates an undue burden on the Examiner since if each document is material to patentability, each document must be carefully considered. However, specific documents not related to patentability include one regarding delisting of a company's stock from an exchange, and various data sheets of tables of parameters of devices.

According to MPEP 609 (emphasis added): "Although a concise explanation of the relevance of the information is not required for English language information, applicants are encouraged to provide a concise explanation of why the English-language information is being submitted and how it is understood to be relevant. Concise explanations (especially those which point out the relevant pages and lines) are helpful to the Office, particularly where documents are lengthy and complex and applicant is aware of a section that is highly relevant to patentability or where a large number of documents are submitted and applicant is aware that one or more are highly relevant to patentability."

Additionally, Applicant is made aware of the court decision in Penn Yan Boats, Inc. v. Sea Lark Boats, Inc., et al., 175 USPQ 260 (DC SFla, 1972) which stated that "Applicant has obligation to call most pertinent prior patent to attention of Patent Office in a proper fashion and to attempt to patentably distinguish his claimed invention from disclosure of patent; failure to take these affirmative steps, particularly when coupled with misrepresentations made to the Patent Office, renders unenforceable the patent issued on his application." Apparently a good reference was buried in the mountain of prior art in the case and never pointed out by the Applicant.

Applicant is reminded that only documents which are "material to patentability" should be submitted. See 37 CFR 1.56 for definition of materiality.

Accordingly, none of the information disclosure statements has been considered. Applicant should submit a new IDS containing only those documents which are material to patentability, and Applicant should call Examiner's attention to particular passages and/or figures of particular documents. Resubmission of the previously submitted documents is not necessary.

### ***Claim Objections***

6. Claims 1, 8, 16, and 22 are objected to because of the following informalities: Each paragraph starts with a capital letter. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 28 recites "The method of above claims", which is unclear since some above claims are not method. The claim also recites "ATM protocol is only exemplary, and the claims are applicable to other protocols", which is also unclear since it requires antecedent basis for ATM protocol, but this is only recited in a few of the above claims. The claim also recites "fixed or variable bit widths and overhead, whether they are pre-determined or programmable." This is likewise unclear since previous claims had indicated the width to be pre-determined; it cannot further be recited that the width might not be pre-determined but rather programmable.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent; except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-3, 5-8, 10-17, 20, and 22-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Mathur, US 6,424,658 B1.

11. As to claims 1, 7, 16, and 20, Mathur discloses a switch/system comprising ports for exchanging data (see Abstract, Fig. 2), and shared RAM memory comprising an

array of cells arranged as rows and a single column having a width equal to a predetermined word width (Figs. 2 and 3, memory 20 having a single column since a column can be defined as the width of the entry for a single packet, such as packets 3 and 6 in Fig. 9; alternatively, memory 20 has a single column such as col. 1 in Fig. 9), circuitry for writing selected data at a port to a selected row as a word of the word width during a first time period, and read it during a second time period for output at a second port (see Figs. 6 and 7, also in general col. 2 line 55 to col. 3 line 11, col. 3 lines 31-44, col. 5 lines 56-61, which states that column address is not required, supporting the assertion that the memory may be thought of as a single column, also col. 11 lines 44-56).

12. As to claims 2 and 17, Mathur discloses buffers converting the bit-widths (see col. 6 lines 36-65).

13. As to claim 3, in Mathur each packet inherently contains certain bit width and associated overhead.

14. As to claims 5-6, Mathur discloses available and used address table (input port table 60 serves both functions since it identifies locations that are busy or free, see col. 9 lines 8-25).

15. As to claims 8 and 11-15, Mathur discloses the invention substantially as described above with regard to claim 1. Mathur additionally discloses a buffer at each port assembling the data stream as recited (see col. 6 lines 36-65). Memory 20 may be considered a plurality of banks (as vertically divided for ports as shown in Fig. 9).

16. As to claim 10, the input port table in Mathur operates as a FIFO as recited.



17. As to claims 22 and 27-28, Mathur discloses the invention substantially as described above with regard to claim 1. Mathur additionally discloses receiving/storing during a write period (see col. 9 lines 33-67), and retrieving/outputting during a read period (see col. 10 lines 16-35). Clearly this can be done as required, and thus twice as recited.

18. As to claims 23-24, the memory in Mathur may be considered as single or multiple cell arrays as desired, to the extent recited.

19. As to claims 25-26, Mathur discloses intervening time periods used for refresh (see col. 10 lines 45-52).

20. Claims 1-3, 7, 16-17, 20-28, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Curtis et al., US 6,925,086 B2.

21. As to claims 1, 7, 16, and 20-21, Curtis discloses a switch/system comprising ports for exchanging data (see Abstract, Fig. 4), and shared memory comprising an array of cells arranged as rows and a single column having a width equal to a predetermined word width (see Fig. 1, the memory considered a single column since the segments A-D must all be accessed to access a packet, Fig. 3 and 6, see also col. 1 lines 45-52, and col. 4 lines 19-29), circuitry for writing selected data at a port to a selected row as a word of the word width during a first time period, and read it during a second time period for output at a second port (see Fig. 4, col. 2 lines 38-43, and col. 3 line 63 to col. 4 line 18).

22. As to claims 2 and 17, Curtis discloses buffers converting the bit-widths (since as in Fig. 1 the memory has N 32 bit cells, and the data bus output is 32 bits).



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23. As to claim 3, in Curtis each packet contains certain bit width and associated overhead (Fig. 3).

24. As to claims 22 and 27-28, Curtis discloses the invention substantially as described above with regard to claim 1. Curtis additionally discloses receiving/storing during a write period, and retrieving/outputting during a read period (see Fig. 5, also col. 2 lines 55-65). Clearly this can be done as required, and thus twice as recited.

25. As to claims 23-24, the memory in Curtis may be considered as single or multiple cell arrays as desired, to the extent recited.

26. As to claims 25-26, Curtis discloses intervening time periods used for refresh (inherently associated with refresh, see Fig. 8).

27. As to claim 30, Curtis discloses strobing on raising and falling edges of a clock (see Fig. 5 DQ Packet 502 vs. clock).

***Claim Rejections - 35 USC § 103***

28. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

29. Claims 4, 9, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathur, or alternatively over Curtis.

30. Claims 21 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathur.

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31. As to claims 4, 9, neither Mathur nor Curtis disclose initial bit width 48 or predetermined bit width of 384. As to claims 18-19, neither Mathur nor Curtis disclose ATM format. As to claim 21, Mathur does not disclose the recited data interfaces. As to claim 30, Mathur does not disclose strobing on raising and falling edges of a clock. Each of these limitations were obvious and well known at the time of the invention. The specific bit widths recited fall with the envisioned embodiments of a clearly scalable bit size. Advantages of using ATM format were notoriously well known. Interfaces such as DDR were widely known to have performance benefits. Strobing on both clock edges is akin to DDR and was known to improve performance. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to add any of these elements, because they and their advantages were widely known at the time.

### ***Conclusion***

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent No:

6,240,096 Fibre channel switch with distributed queuing.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571) 272-4210. The fax phone

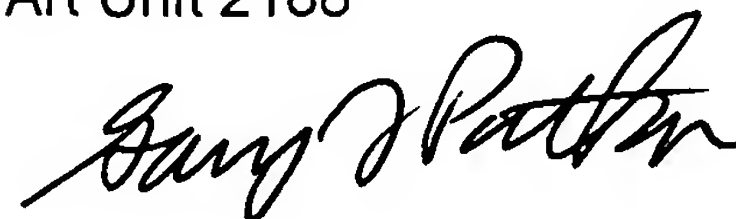
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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 15, 2006

Gary J Portka  
Primary Examiner  
Art Unit 2188



**GARY PORTKA**  
**PRIMARY EXAMINER**